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The Journal of Cutaneous Diseases

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THE JOURNAL OF CUTANEOUS DISEASES
INCLUDING SYPHILIS

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THE JOURNAL OF CUTANEOUS DISEASES

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FRAMBOESIA TROPICA (YAWS, PIAN, BOUBA).

By Aldo Castellani, M. D.,

Director of the Clinic for Tropical Diseases, Colombo (Ceylon).

Read by title before the Sixth International Dermatological Congress, New York, September 9-14, 1907.

THE disease was first called frambœsia by Sauvage in 1759, on account of the raspberry-like appearance of the eruptive elements. The colloquial name most frequently used in the British colonies is yaws; in French colonies, pian. Other synonyms are parangi (Ceylon), momba (Angola), dubi (Gold Coast), tetia (Congo Coast), framosi (Calabar), aboukone (Gaboon), gattoo (West Coast Africa), Kuena (Burma), puru (Borneo, federated Malay States), patek (Dutch Indies), tonga (New Caledonia, and Loyalty Islands), coco (Fiji), tona (Tonga Island), lupani tomo (Samoa). In Venezuela and other South American countries the name bubas is much used. Charlouis in 1882 suggested the term polypapilloma tropicum.

Geographical distribution.—Yaws is essentially a Tropical disease, as few, if any, genuine cases have been reported from temperate zones. There are authors, however, who believe that yaws was in the past endemic also in temperate zones; for instance the so-called "button scurvy" disease which was common in Ireland about a century ago, is considered by some to have been a form of frambœsia.

The peculiar disease called sibbens or sivvens, an outbreak of which occurred in Cromwell's armies and in Scotland during the seventeenth century, has been also believed to be yaws.

At the present time cases of a skin disease resembling yaws have been reported by several writers in Greece.

Africa.—The disease is very rare in the northern regions of the continent; it is said to be occasionally met with in Algeria; it is apparently non-existent in Egypt, though, according to some writers, fairly common in some districts of the Soudan. Yaws is very common on the West Coast, Congo Free State, on the Gaboon River; it is also found in Mozambique, Angola, Madagascar, and

the Comoro Islands. In Uganda and the region of the great lakes it is occasionally met with. Recently Griffith has observed yaws among the kaffirs in South Africa near Kimberley.

Asia.—The disease is unknown in Japan, and in the central and western regions of the continent. It is also unknown in most parts of China. The affection is frequently met with in the Malay Peninsula, Assam, Upper Burma, Siam, Java, Batavia, and is extremely common in Ceylon, where it is known as parangi. The number of cases treated in the Government Hospitals in Ceylon during the last seven years was as follows: 3646 in 1900; 3117 in 1901; 3434 in 1902; 3254 in 1903; 3501 in 1904; 3535 in 1905; 3606 in 1906.

In India cases of yaws are very rare, though small outbreaks of the disease have been described by various observers.

Australasia.—The disease is not present in Australia, Tasmania, and New Zealand—while it occurs frequently in many of the Pacific Ocean Islands.

It is extremely common in Fiji, British Guinea, Loyalty Islands Samoa, New Hebrides, New Caledonia.

America.—In the West Indies and French Antilles, yaws is very common. In Cuba some cases occur. It is known in British Guiana, Venezuela, and Brazil. Cases have been occasionally reported from the Southern United States, but never from the Northern States, or from Canada.

History.—It has been suggested by some authors (Hume, Adams) that frambœsia is the disease from which the Israelites suffered during their emigration from Egypt, and that the word "saraat" occurring in the thirteenth chapter of Leviticus, really means frambœsia rather than leprosy, as usually translated.

In the works of Avicenna and Ali Abbas of the tenth century there is mentioned a disease called *safat* or *sahafati* with symptoms somewhat similar to frambœsia; most authors, however, are of opinion that the disease referred to by the two Arabian physicians was syphilis.

The study of the disease first began to engage the attention of European physicians after the discovery of America. Ovedio y Valdez (1478-1557) describes the malady in his work "La Genera y Natural Historia de las Indies." Pison (1648) refers to the disease in his work "De Medicina Brasiliensi," Rochefort (1656), Raymond Breton (1665), and Labat (1694) relate in their publications that the inhabitants of the West Indies (Caribs) frequently suffered from a peculiar disease called by the natives *pyans* or *yaya.*

Bontius in 1718 proved that frambœsia was endemic not only in the West Indies of Africa, but also in Java, Sumatra, and other Dutch colonies of the East, where the disease was known under the name of " anboyna pox or pimple."

In the slave-trading days outbreaks of yaws frequently occurred on the crowded ships carrying African slaves to America; special hospitals for the isolation and treatment of slaves suffering from yaws were built on all the important estates in the West Indies. Occasionally in the countries in which it is endemic the disease has spread in such a way as to give rise to true epidemics; an example of such an epidemic occurred in Dominica in 1871, when two special segregation hospitals had to be built for yaws patients.

In 1694 an outbreak of a peculiar disease occurred in Scotland called sibbens or sivvens (*sivvi*, Celtic for raspberry) imported apparently by Cromwell's soldiers; it is believed to have been yaws by some authorities, while others consider it to have been syphilis.

The so-called *button scurvy* of Ireland, endemic there in the eighteenth century and in the beginning of the nineteenth century; the " radesyge " which appeared in Sweden and Norway in 1710, when it was imported into Finland; the " mal de Chicot " in Canada have been considered by some writers to have been forms of yaws.

Attempts have been made by several authors, among the moderns, Breda, to distinguish between yaws, parangi, pian, and boubas; those, however, who have had the opportunity of studying the disease in different countries have all come to the conclusion that yaws, pian, parangi, and boubas are simply synonyms referring to the same malady, viz., frambœsia.

Since the time of Labat there have always been a few writers who have believed that frambœsia is a form of syphilis; this theory has been supported by so high an authority as J. Hutchinson.

In modern times the disease has been investigated clinically and experimentally by a large number of observers.

Of great importance were the researches, carried out in 1882 by Charlouis, who experimentally proved that syphilis and yaws are two different diseases; the clinical investigation of the disease by Numa Rat also was most complete; his report on the malady, written in 1891, has become classical.

Among the more recent observers who have investigated yaws in various parts of the Tropics are Manson, Neisser, Daniels, Janselme, Powell, Branch, Martin, Halberstadter, Von Prowazeck, and many others.

Symptoms.—For convenience's sake the course of the disease may be divided into three periods:

1. A primary stage comprising the development of the primary lesion.

2. A secondary stage during which the characteristic frambœtic granulomatous eruption appears.

3. A tertiary stage in which the late manifestations of the disease develop: deep ulcerations, gummatous-like nodes, etc.

This division into three periods is somewhat arbitrary, as tertiary symptoms may appear during the secondary stage.

It is often stated that the whole course of the disease varies between three to six months in children, and six to twelve in adults; in my experience, however, the duration of the malady is often much longer, and, when the infection does not become extinct after the secondary stage, may extend to many years. In fact I believe that in a certain number of cases,—although there are periods during which the organism is apparently free from symptoms, the infection is simply dormant and sooner or later gives rise to renewed attacks.

The primary lesion.—After an inoculation period varying in length between two to four weeks, characterized often by signs of malaise, rheumatoid pains, headache, irregular rises of temperature, a primary sore appears at the seat of inoculation, which is generally extragenital. The primary sore is a papule which after about a week becomes moist, developing a yellowish secretion which dries into a crust; often at the place of inoculation several papules appear which become moist and fuse together into a single element covered by a thick crust. If after some days the crust is removed the primary sore will appear as an ulcer,—not rarely of rather large dimensions,—with clean-cut edges and a granulating fundus.

This ulcer may heal, leaving a whitish scar,—or in other cases it may develop into a granulomatous mass, not dissimilar to the granulomata of the secondary eruption which appear later on, but frequently much larger. This large single projecting nodule is called "mother yaw" or "maman pian" in French patois. Occasionally round it, before the general eruption begins, several smaller granulomata develop like satellites. The primary sore is often painful during the first stage of development; later it may be quite painless; occasionally there may be pruritus.

The proximal lymphatic glands may become enlarged and hard, but do not come to suppuration.

The seat of the primary sore is generally extragenital. It often developes on an old ulceration, an itch pustule, an itch bite, a wound, a vaccination mark; the smallest erosion is sufficient for the entrance of the virus.

Most of my female patients had the primary sore on one of the mammæ, developing on some crack or abrasion of the nipple and areola. In several other women the primary lesion was found on the skin of the trunk, just above the hip, this being due to the custom the Ceylon women have of carrying their child astride of the hip; any yaws element present on the scrotum or nates of the child will therefore be continually rubbed against the skin of the mother, and infection will take place through any slight abrasion already present, or that may be caused by the friction.

In men and children the primary sore is often found on the arms, hands, and legs, but it may develop on any region of the body. The primary sore may heal before the general eruption begins,—but as a rule is still present when the secondary eruption appears. I had a case in which the primary sore was still present six months after its first appearance, and when the secondary eruption had nearly undergone complete involution. The duration of the primary sore, therefore, may vary between a few weeks and several months. The primary sore leaves a whitish scar which later on may become pigmented; in some cases the scar is small and smooth, in others it is large and very thick. It is to be noted, however, that in Ceylon the disfiguring scar so often found is partly due to the custom the natives have of cauterizing the sore, energetically and with very primitive methods; in other cases the large disfiguring cicatrix is due to the primary sore having developed on an old ulcer which in healing leaves a coarse scar.

The secondary stage.—The general eruption usually begins between one and three months after the first appearance of the primary sore. Before the general eruption appears the patient often complains of malaise, headache, severe pains in the muscles, joints, bones. In some cases fever is present of an intermittent or remittent type; the patients, however, are ordinarily able to attend to their work.

The general eruption develops, in my experience, as follows: Minute roundish papules the size of pinheads appear on various parts of the body; some papules soon show a yellow point or minute yellow crust at their apex. Most of the papules remain of practically the same size for many weeks and disappear, leaving occasion-

ally some furfuraceous patches; others become larger, several often coalescing, and frequently acquiring a dark areola in natives, a reddish one in Europeans. Some of the larger papules increase in size, and develop into large granulomatous-looking nodules, covered with a crust, honey-yellow or brownish, formed of dessicated secretion. If the crust covering the granulomata be removed there will be seen a raw surface throwing up coarse red or yellowish fungoid granulations secreting a thin, slightly purulent secretion, which soon dries into a crust again. These yaws granulomata are of various size, and may be found on practically any part of the body; they are extremely common on the upper and lower limbs, and on the face; on the scalp they are very rare; they may form rings round the mouth or anus and may enclose sound skin. They may remain of the same size and appearance for months; often after a few weeks the secretion diminishes, and a process of hyperkeratosis sets in: they become of much harder consistency, and some of them, especially those of the feet, may be covered with numerous hard, verrucose-like, small protuberances. In the majority of cases within three to six months in children, and six to twelve months in adults, the yaws dry up, shrink, and disappear, leaving dark, hyperpigmented spots on their site which are very persistent. In some cases the granulomatous eruption is very persistent, lasting for several years, new crops of granulomatous nodules appearing from time to time in succession. Each frambœtic granuloma generally undergoes involution within two to four months, leaving behind a dark area; occasionally, however, the frambœtic granuloma does not involute so soon. I have among my patients a boy of eleven who two years ago had a general eruption of yaws: all the granulomata disappeared excepting one on the right knee, which is still present.

The granulomata are seldom painful unless when developing between the toes, on the soles of the feet, or round the nails; they often cause itching.

Patients affected with yaws often exhale a peculiar offensive odor which has been variously described as sour or musty; this is probably due to the growth of various bacteria representing secondary infections, under the crust of the granulomata; I have more especially noticed this offensive odor when the secondary infection is due to bacilli of Vincent's type, and coarse spirochætes. In such cases if the sores are well washed with perchloride solution for two or three days, the bacilli of Vincent's type and coarse spirochætes disappear and the smell is no longer noticeable, though the granulomata do not undergo any change.

Though the frambœtic granuloma is the characteristic eruption of the secondary stage, there are during this stage eruptions of different types, papular, scaly, and ulcerative.

An average ordinary case will present at the same time several typical yaws granulomata, numerous small reddish papules with the epidermis intact, other papules which have become moist and are covered by a tiny yellow crust; several furfuraceous patches here and there, and spots of increased pigmentation at the place of previous granulomata. Occasionally some granulomata break down and large irregular ulcers showing in their center and reddish papillomatous masses develop which in my experience do not usually heal spontaneously.

At times in the later period of the secondary stage peculiar, roundish, or irregularly outlined whitish patches are present, especially on the back and arms, with a nutmeg-grater like surface; on closer observation these patches are seen to consist of numerous hard, conical papules, containing in their center an epidermic plug, which is easily removed, leaving a depression in the papule; sometimes the plugs are spiny, and in this case the eruption closely resembles lichen spinulosus.

Eruptions on the palms and soles.—The granulomatous eruption very often attacks the soles of the feet; at first dark-brownish or livid intense spots, very painful, appear; their thick epidermis is gradually broken away and is pierced by frambœsial nodules similar to those found on the other regions of the body. This frambœtic affection of the soles is very painful, and is called by natives of Ceylon "dumas."

The same lesions, but generally not so severe, may be found on the hands. The granulomatous infiltration may attack the matrix and margins of the nails (frambœtic onychia and paronychia). The nails become thickened, dry, brittle, and may be cast off entirely, though later they grow again.

After the granulomata have disappeared—occasionally at the same time—peeling whitish patches may be found on the palms and soles of the feet, closely resembling the syphilitic psoriasis palmaris, et plantaris.

Peculiar pitted appearance of the palms.—In several cases, in the latter part of the secondary stage, I have observed on the palms and wrists hard, roundish, flattened papules or small nodules, having a thick, hard, epidermic plug in their center; this plug falls off spontaneously or is easily pulled out; a deep depression remains,—

the papules gradually disappear, but the depressions remain and the palms take on a peculiar pitted appearance.

This condition of the palms may remain unchanged for several years after every symptom of frambœsia has disappeared. A somewhat similar appearance of the soles of the feet is occasionally met with.

Lesions of the hair and nails.—I have never noticed any change in the appearance of the hair, nor alopecia. A few hair follicles may be destroyed when the granulomata develop on the scalp; which, however, very seldom happens.

Mucous lesions.—These are not very common; during the secondary stage small granulomatous nodules may develop at the base of the tongue, also whitish patches closely resembling syphilitic leukoplakia.. Small granulomata may develop on the nasal mucosa.

Constitutional symptoms. Fever.—As already stated, fever is frequently present, of intermittent or remittent type, before the general secondary eruption begins. During the secondary stage proper fever is absent unless complications supervene.

Lymphatic glands.—In a number of cases various groups of lymphatic glands are found to be enlarged. The enlarged glands are roundish or spindle-shaped, hard, painless, and never come to suppuration unless a secondary pyogenic infection be present; the cervical and inguinal glands are those most frequently enlarged.

Alimentary system.—As a rule the digestive functions are not disturbed. In children slight diarrhea may be occasionally noticed preceding the general eruption. The spleen and liver are very often found enlarged in children, but this is probably due to progressed or concomitant malaria infection. The microscopical examination of the feces of yaws patients will often reveal ova of various worms; ascaris lumbricoides, trichocephalus dispar, and occasionally anchylostoma duodenalis; but this is of frequent occurrence also in normal natives.

Respiratory system.—The small granulomatous ulcers occasionally met with in the nasal mucosa have already been mentioned; similar ulcerations are to be found, though very rarely, in the larynx. As a rule the respiratory, as well as the circulatory, system is not affected.

Locomotory system. Joints.—Arthritis pseudo-rheumatism.—In some yaws patients several of the large articulations may become swollen and very painful. The condition is often of an acute character and may be accompanied by fever, so that an attack of ar-

ticular rheumatism supervening on the frambœtic infection might be suspected. Sodium salicylate, however, is not beneficial, while the administration of large doses of potassium iodide speedily reduces the temperature to normal, and causes the swelling of the articulations to disappear. At other times one articulation only is involved and the symptoms may become so serious as to suggest purulent arthritis—as shown by the following case:

Podyhanny, female, æt. forty, was admitted to the clinic on December 9, 1906, showing a typical general eruption of yaws. After a week, during which time no specific treatment was given, she began to complain of malaise, vague muscular pains, and severe pain in the left knee and in the right shoulder, the temperature rising to 101. Salicylate of sodium was given in large doses. The following day the pain in the shoulder and the muscular pains had disappeared and there was no fever in the morning, but at night the temperature rose to 103; the knee was very painful and there were clear signs of effusion. During the next few days the condition became worse, the fever ranging between 99 to 100 in the morning, and 103 to 104.2 at night. The patient often had shivering in the morning, while at night she perspired profusely. Examination of the blood for malaria negative; well marked leucocytosis (22,000 leucocytes per cmm.) present. Spleen not palpable. The knee became greatly swollen and extremely painful, the skin very tense; no movement of the articulation was possible. On the sixth day I tapped the articulation with a sterile syringe expecting to find pus, but only clear fluid was drawn. Large doses of potass. iodid. were then given, and all the symptoms disappeared in four or five days.

In many cases the smaller articulations become involved; the symptoms in such cases are not acute and there is usually no fever.

Bones.—Inflammation of the periosteum of various bones is of common occurrence. Very frequent is a form of multiple periostosis of the digital phalanges, the cause of the "multiple dactylitis" so often seen in yaws patients.

Muscles.—Contractures of various groups of muscles may be observed; fairly common is a contracture of the flexor muscles of the forearm; this contracture is often permanent, and in my opinion, is probably due to pathological alteration of the peripheral nerves, rather than of direct muscular origin.

Nervous system. Neuritis.—Neuralgic pains are often observed; but also a true form of neuritis must be admitted; I have seen in several cases clear symptoms of neuritis of the sciatic nerve,

with severe pain along the course of the nerves and signs of motor and trophic disturbances.

Hyperidrosis.—In several of my patients I have noticed hyperidrosis. The phenomenon was limited to the face in some cases, to the hands and soles of the feet in others; it never extended to the whole body, and always affected symmetrical regions. Hyperidrosis is more frequently observed in children than in adults. In one case—a boy of fourteen—presenting a general eruption of yaws, the hyperidrosis of the face was so marked that large drops of perspiration were continually dropping down. I treated him with potassium iodide; after a month the yaws granulomata had disappeared and the hyperidrosis was no longer noticeable. In some cases the hyperidrosis ceases suddenly without treatment; the condition may last, however, for some weeks or months.

Cerebro-spinal fluid.—In the three cases of typical yaws I have performed lumbar puncture, collecting in each case about 22cc. of fluid. The liquid was in all cases perfectly clear, like distilled water. The pressure was not increased. The physical and chemical characters were alike in all cases and apparently did not show much variation from what is found in normal condition. The density varied between 1.003 and 1.005.

A certain amount of globulin was present and a substance (dextrose?) reducing Fehling's liquid. This reducing substance was in two cases, distinctly in excess of what is observed in the normal fluid. No cholin was found. The reaction of the fluid was alkaline. In two cases the centrifuged liquid examined microscopically, did not contain any cellular elements: in the third case a few, extremely rare mononuclear cells were found. The liquid was sterile, no spirochætes could be detected.

The eyes.—Granulomatous and papular eruptions may develop on the eyelids. A slight periostitis of the orbital margin is not rare, the margin becoming thickened and very painful on pressure. The occurrence of iritis is denied by most authors. I have seen two typical cases occurring during the general granulomatous eruption; in both cases the affection was of moderate severity; there was photophobia, ciliary congestion, discoloration of the iris; pupillary reaction was almost absent. Both cases recovered on large doses of potassium iodide without any local treatment.

The Genito-Urinary System.—The primary lesion is rarely found on the genital organs; in fact in all the cases I have seen, which amount to several hundred, the primary lesion was always

extragenital. Eruptions of the secondary stage, papular and granulomatous, frequently involve the skin of the penis and of the labia; granulomatous ulcerations may be found on the vaginal mucosa.

The urine, as a rule, does not contain anything abnormal; only when there is fever, as, for instance, when the articulations are acutely involved—then a slight amount of albumin may be present.

The blood.—In all my cases in which the blood was examined a certain degree of anæmia, never very severe, was present. The number of red blood corpuscles varied from 3,000,000 to 4,000,000; the hæmoglobin index (Fleischl) from 50 to 75. The red blood corpuscles did not show anything abnormal in their shape. On several occasions I noticed a comparatively large number of polychromatic erythrocytes staining blue instead of pink with Leishman's method. Many of these basophile red cells are microerythrocytes.

The leucocytes varied from 7,000 to 11,000 per cmm. In the majority of cases an increase was noticeable in the number of the large mononuclears, even when there was no sign and no history of malaria. In almost all the cases the eosinophiles were increased, this being possibly due—in part at least—to the presence of intestinal worms, as revealed by the microscopic examination of the stools, which showed frequently ova of ascaris lumbricoides, trichocephalus dispar, and in a few instances of ankylostoma duodenalis.

Tertiary Stage.—The disease often terminates with the secondary stage; in some cases, however, the infection does not become extinct, and tertiary lesions appear. Sometimes the secondary and tertiary stages merge into each other, but frequently the tertiary symptoms appear after the lesions of the secondary stage have undergone complete involution. The interval of time varies considerably in length and may extend to many years.

The characteristic lesions of the tertiary period are gummatous-like nodules and deep ulcerative processes. These gummatous nodules may develop in any tissues. When developing in the skin and subcutaneous tissues they are indolent and by their softening and breaking down ulcers are produced which may present clear-cut margins and a granulating fundus; when several contiguous nodules break down, serpiginous ulcers are left. In other cases deep irregular-shaped ulcerations, with very thick and undermined edges, are seen; in others large fungative ulcers are present. On healing, these various ulcers leave whitish scars which, when unbroken, run

a very chronic course, and when healing leave often very thick and disfiguring scars which often undergo retraction, and cause thereby permanent contractures and disfigurations.

Lesions of the osseous type are very frequent; painful nodes developing under the periosteum of several bones; ribs, sternum, etc. In other cases a diffuse chronic periostitis is present, altering the normal shape of the bones. Contractures of various groups of muscles are frequently seen.

Tertiary affections of the internal organs and of the central nervous system have not yet been described; I believe that future investigation will prove that they do occur in some cases. It is also probable that further research will show that framboesia may be hereditary—though it is worth noting that, in contrast to syphilis, parents generally contract the malady from their children.

Cases illustrating the occurrence of tertiary symptoms in yaws—As several of the modern authors deny the occurrence of tertiary symptoms, I may quote a few of my cases clearly showing the existence of such lesions:

Case 1. Young Singhalese girl of about fourteen years of age. No history of syphilis, either congenital or contracted; she is a strong-looking girl, her teeth, eyes, and ears normal; her genital organs are intact; five years ago suffered, together with all the other members of her family, from yaws, and was treated in a Government hospital, from which she was discharged cured a few months later. She remained in good health till four months ago, when she noticed a slight indolent swelling on her right leg. The swelling increased in size and finally broke down, leaving a rather large ulceration. Two months later, when I examined her, several ulcers were present on both legs, of irregular shape, thick margins, rather deep, and without much secretion; the left tibia was arching forward; moreover, on one of the ribs an indolent gummatous-like swelling was present. In the secretion of the ulcers no spirochætes were found. The girl has been treated with potassium iodide, and the ulcers have healed leaving large whitish irregular scars (see Fig. 12).

Case 2. Singhalese girl of about eleven years of age, sister of the previous patient. No history of syphilis; genital organs intact. Five years ago suffered from yaws at the same time as her sister. She recovered and remained in good health till three months ago, when an ulcerative process developed on the soft palate which, at

the time I examined her, had already destroyed the uvula. The patient presented thickenings of the metacarpal bones and phalanges which had caused a certain distortion in the right hand. The potassium iodide treatment was begun some months ago, and the patient is rapidly improving, the ulcerative process of the palate being already arrested and healed. No spirochætes were found in the ulcer.

Case 3. Singhalese boy nine years old; strongly built, with no signs of hereditary or contracted syphilis; was treated by me for a general eruption of yaws in June and July, 1905. The boy is living near the clinic, and it has been very easy, therefore, to keep him under observation. After having been discharged at the end of July, 1905, he was well for eight months; only the dark spots at the site of the granulomata and a scurfy condition of the skin of the back could be seen. In March, 1906, he suffered from a mild form of "Dumas," a few small granulomatous nodules being present on the left foot. This condition disappeared in a few weeks under the action of large doses of potassium iodide; and the boy remained in good health till May of this year (1907), when several gummatous-like nodules developed on both legs; the nodules broke down, leaving serpiginous ulcers. At the same time a painful node appeared on the left clavicle. Large doses of potassium iodide were again given, with the result that the ulcers have healed, leaving whitish scars, and the node on the clavicle has become absorbed.

Pathology.—The histo-pathology of the disease has been thoroughly investigated by Unna, Jeanselme, Macleod, and Plehn. I have come to the same conclusions. The typical lesions of yaws must be considered to be granulomata. There is a very diffuse plasma-cell infiltration, the plasma-cells retaining their original type better than in any other granulomata. The proliferative changes are very well marked; the papillæ are much elongated, their blood vessels being dilated but rarely thickened.

When the yaws have reached a certain stage a very-well marked hyperkeratosis is noticeable. I would call attention to the appearance of the films, taken in the usual way from yaws granulomata and stained according to Leishman's method. In such films it is interesting to note the presence of a large number of polychromatic red blood cells of very different size; some much larger than the normal erythrocytes—some much smaller. They are stained deep or light blue instead of pink, and sometimes have a granular appearance. The leucocyte present in the films frequently contain in

their protoplasm, and sometimes in their nuclei, roundish or oval, more or less deeply stained bodies, which I believe to be probably polychromatic micro-erythrocytes engulfed by phagocytes.

Etiology. Historical.—Various bacteria have been described in yaws; Eijkman found some peculiar bacilli; Pariez observed numerous micrococci; Powell, in 1896, cultivated in two cases a yeast which was present in the granuloma and also between the epithelial cells. Breda in several cases found a bacillus which he named the "Framboesia bacillus."

Nicholls and Watts, in 1899, found in the granulomata a coccus, which they cultivated in pure cultures. The same coccus was found once in the lymphatic glands. Inoculations into animals did not succeed.

In February, 1905, an extremely delicate, almost invisible spirochæta, or spirillus, as I thought at that time, was observed by me in a case of yaws. Schaudinn's discovery of a spirochætes in syphilis, published soon after, induced me to work at the subject in a systematic manner. A preliminary note on the presence of spirochœtes in yaws was published by me on June 17, 1905, in the *Journal of the Ceylon Branch of the British Medical Association;* another communication was made by me at the meeting of the British Medical Association, Leicester, July, 1905. Several more cases of yaws showing spirochætes I described in the *British Medical Journal* of November 18 and 24, 1905; at that time I had 11 positive cases out of 14. My results were confirmed by Wellman in one case (*Journal of Tropical Medicine*, December 1, 1905), and by Powell in another (*British Medical Journal*, December, 1905). Further researches of mine appeared in the *Journal of Tropical Medicine*, January 1, 1906, and *Deutsch. med. Woch.*, No. 3, January, 1906. Recent publications by various authors confirm the presence of spirochætes in yaws; among these publications one of the most important is by Borne, who has found spirochætes in 9 cases out of 11. (*Geneeskundig Tijdschrift*, 1906). Recently Borne has informed me by letter that he has been able to detect spirochætes in 49 cases out of 52. Halberstaedter has very recently confirmed the presence of the spirochæte in human yaws as well as in monkeys inoculated with the disease.

SPIROCHÆTE PERTENUIS (CASTELLANI). JUNE, 1905 [1]

The spirochæte pertenuis is an extremely delicate, motile, spiral-

[1] In the *British Medical Journal* of November 26, 1905, I suggested the name *spirochæte pallidula* for the yaws spirochæte on account of its resemblance to the

shaped organism; its length varies from a few microns to 18 and 20 microns and even more. It is extremely thin; some individuals are, however, thicker than others. The yaws spirochæte is stained with difficulty. Good results are obtained by Leishman's method provided the alcoholic solution is allowed to act for five minutes and the subsequent admixture with distilled water for from one-half hour to several hours. Giemsa's stain also gives good results. Using either of these methods the spirochæte stains purplish; occasionally a few chromatoid points may be seen in the body of the organism.

The extremities of the organism are often pointed, but, due, possibly, to the manipulation of the films, forms may be met with, presenting blunt extremities, or one extremely blunt and the other pointed.

In a few individuals one of the extremities may present a rather large pear-shaped expansion, or a loop-like formation. The number of waves varies (6 to 20 and more), but they are generally rather numerous, uniform, and of small dimensions. Occasionally a portion of the spirochæte shows numerous narrow uniform waves, while the rest of it has no waves at all. Sometime two spirochætes may be attached together, or apparently twisted one on the other.

As regards the minute histological structure I have not so far been able to detect an undulating membrane, though the presence of such an undulating membrane has been admitted by other observers (Blanchard). Occasionally in preparations stained by Löffler's method of flagella staining, it has seemed to me that some of the organisms present an extremely delicate flagellum at one end. According to my results, therefore, the organism should be considered a *treponema* rather than a spirochæte. Further investigation, however, is necessary to settle this point.

From the description I have given it will be seen that the yaws organism show morphologically resemblance to the organism of syphilis. In fact I was for a long time of the opinion that the two germs differ biologically rather than morphologically. According to Blanchard, Mesnil, and others, however, slight morphological differences can be made out. Martin in a recent very interesting publication in the *Deutsch. med. Woch.*, states that the yaws spirochæte is even more delicate and more difficult to stain than the *spirochæte*

spirochæte found in syphilis; according, however, to the laws of nomenclature, the correct zoological name is *spirochæte pertenuis*, which form I had used some months before. (*Journal of the Ceylon Branch of the British Medical Association*, June 17, 1905.)

pallida of Schaudinn. Rivas states that the spirochæte pertenuis is thinner than the spirochæte pallida, and has narrower waves. In non-ulcerated lesions the S. pertenuis is the only germ present.

Bacteriological flora found in open sores of frambœsia.—While in the non-ulcerated lesions the S. pertenuis is the only germ found, the ulcerated lesions of frambœsia are invaded very quickly by all sorts of germs. Besides innumerable bacteria, often spirochætes of various kinds are present, one form is rather thick, and takes up the stain easily; it is morphologically identical with the *spirochæte refringens* of Schaudinn. Another form is thin, delicate, with waves varying in size and number, and with blunt extremities; I proposed for this variety the name of *spirochæte obtusi*. A third form is also thin and delicate, but is tapering at both ends; I named it *spirochæte acuminata*. The *spirochæte pertenuis*, as found in non-ulcerated lesions, may also be present.

INOCULATION EXPERIMENTS OF YAWS IN MAN

Paulet (1848) inoculated fourteen negroes with the secretion taken from yaws granulomata. All of them developed yaws, the inoculation period varying from twelve to twenty days, when at the place of inoculation, in ten cases the first nodule of yaws appeared, soon followed by a typical general eruption. In two cases apparently the eruption did not start from the seat of inoculation.

The investigation of Charlouis (1881) is most important. He inoculated thirty-two Chinese prisoners—who had never suffered from the disease—with crusts and scrapings of a yaws case. In twenty-eight cases the disease developed, beginning always from the seat of inoculation.

Moreover Charlouis inoculated a native, suffering from typical yaws, with syphilis. The inoculation was quite successful, a primary syphilitic sore developing followed by all the usual types of secondary eruption. That yaws patients are not immune against syphilis is proved also by Powell, who described two very interesting cases of syphilis supervening on yaws.

PERSONAL EXPERIMENTAL INVESTIGATIONS

Inoculation of yaws in monkeys.—My first experiments, made at the beginning of 1905, on a "purple-faced monkey" (*Semnopithecus cephalopterus*) were negative. In February and March of 1906 I made some more experiments of inoculation on three monkeys

of the genus macacus, with positive results in one case. The monkey which was successfully inoculated with yaws was later successfully inoculated with syphilis.

In the meantime Neisser, Baermann, and Halberstadter published in the *Münch. med. Woch.* (November 28, 1906), a complete report on their results on the inoculation of yaws in monkeys, coming to the conclusion that monkeys of a high, as well as of a low type are susceptible to be infected with yaws; and that monkeys immunized for syphilis do not become immune for yaws.

I have continued the investigation on numerous monkeys of the genus macacus and semnopithecus. In both genera the positive results are fairly numerous provided the scarifications on which the yaws material is inoculated are made as deep as possible. I quote two of the experiments which gave positive results.

Monkey No. 4 (*Macacus pileatus*), November 10, 1906. The scrapings taken from a non-ulcerated yaws papule is rubbed thoroughly into the scarified spots over the left eyebrow. The slight local inflammatory artefacts caused by the scarification subsided in three days. Nineteen days after the inoculation a very small flattened papule surrounded by an infiltrated zone appeared at the seat of inoculation. The lesion soon became enlarged and moist, the secretion drying into a thick crust. On removing this crust a granulating raw surface was seen. Two months later the first element being still present, four more papules appeared, two on the lower part of the forehead close to the primary lesion, and two just over the upper lip. One of these elements disappeared after a few days: the others became moist and a yellowish crust formed on each of them. These papules remained always small and disappeared within three months, leaving tiny dark marks. The eruption was evidently very itching, as the monkey was continually scratching. It is possible that the papules observed two months after the first lesion appeared may represent facts of auto-inoculation by scratching rather than representing a true secondary eruption.

Monkey No. 17 (*Semnopithecus priamus*), October 15, 1906. Scrapings taken from a non-ulcerated papule of a yaws patient is well rubbed into deep scarifications over the left eyebrow. Forty-five days after, three slightly elevated spots appeared which soon fused together into an infiltrated mass, covered by a thick crust. The lesion is still present and of much larger size. It was examined for the spirochæte pertenuis on three different occasions, with posi-

tive results twice. Altogether eight monkeys of the genus macacus and eleven of the genus semnopithecus have been inoculated by me with scrapings taken from the eruptive elements of yaws patients; the inoculation was successful in five monkeys of the first genus and nine of the second. The incubation period has varied from a minimum of sixteen days to a maximum of ninety-two. The appearance of the lesion developing at the seat of inoculation was practically the same in all cases, viz., an infiltrated spot slowly increasing in size and soon becoming moist, the secretion drying into a thick crust. When the crust was removed a raw, granulating red surface was seen. With the exception of three cases the eruption remained localized at the point of inoculation, and no other eruptive elements appeared. In the three cases in which eruptive elements developed some time after the primary lesion, in one, as I have already mentioned (monkey No. 4), two small papules appeared on the lower part of the forehead in vicinity to the primary lesion, and two others above the upper lip. Of the other two monkeys in one a rather large moist papule appeared on the lower lip three months after the primary sore had developed; in the other three, small papules, which soon broke and became covered with a crust, developed on the lower part of the forehead close to the primary lesion, two and a half months after the first lesion had appeared.

To be Concluded

DESCRIPTION OF PLATES.

PLATE XIII—Fig. 1. Primary lesion of Framboesia on the thumb. General eruption on the face.
Fig. 2. Primary lesion under the nipple.
PLATE XIV—Fig. 3. Showing how Ceylon women carry their children.
Fig. 4. Framboesia, general eruption.
PLATE XV—Figs. 5 and 6. Framboesia, general eruption.
PLATE XVI—Fig. 7. Framboesia, general eruption.
Fig. 8. Palmar eruption, showing peculiar pitting.
PLATE XVII—Fig. 9. Framboesia, general eruption.
Fig. 10. Framboesia. Eruption of the soles of the feet, which is called "Dumas" by the natives of Ceylon.
PLATE XVIII—Fig. 11. Framboesia, tertiary eruption on heel. Note pitting of skin.
Fig. 12. Framboesia, tertiary lesions of legs.
PLATE XIX—Fig. 13. Spirochaete Pertenuis.
Fig. 14. Experimental Framboesia. Initial lesion on left eyebrow. General eruption on upper lip.

PLATE XIII.—To Illustrate Dr. A. Castellani's Article.

Fig. 1.

Fig. 2.

PLATE XIV—To Illustrate Dr. A. Castellani's Article.

Fig. 1.

Fig. 3.

PLATE XV—To Illustrate Dr. A. Castellani's Article.

Fig. 6.

Fig. 5.

PLATE XVI—To Illustrate Dr. A. Castellani's Article.

Fig. 7.

Fig. 8.

Fig. 10.

Fig. 9.

PLATE XVIII—To Illustrate Dr. A. Castellani's Article.

Fig. 11.

Fig. 12.

PLATE XIX—To Illustrate Dr. A. Castellani's Article.

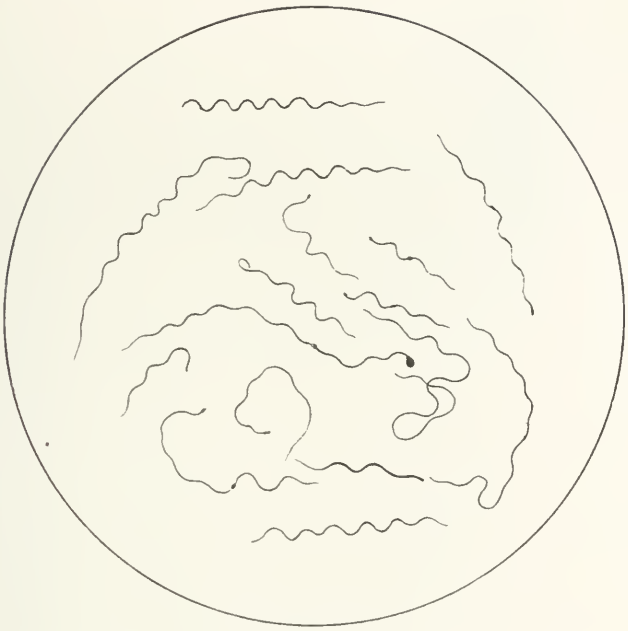

Fig. 13.

Fig. 14.

ZITTMANN'S DECOCTION.

By Douglass W. Montgomery, M. D., Professor of Diseases of the Skin, University of California.

Read before the Society of German Physicians, January, 1908.

IT is often concluded that because a drug has certain chemical properties it must necessarily be of value in a given disease. This mode of reasoning is apt to lead into error. It is also erroneous to assert that because a medicament does not answer to certain chemical requirements it must necessarily be valueless, for it is not a drug's composition but its actual results on a disease that are its final test. Let us take as an illustration of our view a decoction that at one time enjoyed a great and deserved popularity in the treatment of syphilis. It fell into disuse, largely because the chemistry of the day asserted that the mercury used in compounding it was insoluble, and therefore could never reach the patient. Now, through chemistry, it is known that mercury is present in the finished decoction, and in a very digestible form.

The name of the preparation in question is Zittmann's decoction, and a remarkable feature of it is, that at first sight not one of the drugs employed in its composition appears to be capable, in the form in which it is used, of exerting the least influence on the disease for which it is prescribed.

The old way of making this preparation is as follows:

R—

Sarsaparilla root	100.00
Water	2600.00

Then add well mixed up and in a linen bag

White sugar	
Powdered alum, ā ā	6.00
Calomel	4.00
Cinnabar	1.00

Allow to stand over night in a covered porcelain or earthenware vessel. The next morning simmer gently for eight hours. Then add:

Fennel seed
Anise seed, ā ā 4.00
Senna leaves 24.00
Licorice root 12.00

The seed should be first brayed in a mortar and the leaves should be cut fine.

Allow the mixture to stand for three hours and then strain off 2500 grams.

This should be labelled Zittmann's Decoction (strong).

The weak decoction is made as follows:

Take the dregs left after straining off the strong decoction, and add to them

Sarsaparilla root 50.00
Water 2600.00

Boil gently as before for three hours, stirring frequently, and add:

Lemon peel
Cassia bark
Licorice root
Short cardamon seeds ..... ā ā 3.00

Allow to stand for three hours and strain off 2500 grams.

Bottle and label Zittmann's Decoction (weak).

The dose of the decoction varies. A wine glassful each of the strong and of the weak is a moderate dose. If it proves too laxative, less may be given. Sometimes large doses are ordered, as a pint of the strong in the morning and a pint of the weak at night, but this is unusual. If the patient is kept in bed, and the decoction is taken warm it undoubtedly adds to its efficacy.

The principle drugs of this preparation are sarsaparilla, senna, and two forms of mercury, calomel and cinnabar.

Sarsaparilla is a soapy plant containing from one to three per cent. of saponin, a small quantity of digitonin, perillin, some starch, and a bitter acrid resin. The soapy, slippery decoction made from this plant has long enjoyed a great reputation as a slowly-acting alterative on sluggishly advancing diseases such as late constitutional syphilis and leprosy. The saponins not only promote excretion through the intestinal canal, but through most other channels as well, and the digitonin, which is a cardiac depressant closely allied to saponin, probably aids in this depurative effect.

Senna is another of the chief drugs in this decoction, and although it is not an antiluetic remedy, yet it is often a most useful drug in syphilis. Years ago I came to the conclusion, as many physicians before me had, that elimination is of infinite value in the treatment of syphilis. Mercury itself is a most active eliminative, as no drug will so quicken the saps of the body, nor hustle out impurities faster. If, however, the mercury introduced into the body lags in its course or in its exit, as it may readily do in many elderly and in some young people, then the addition of senna may furnish just the necessary acceleration.

In the making of Zittmann's decoction, a small quantity each of alum, calomel, cinnabar, and sugar are tied up in a linen bag, and are thrown into the pot with the other ingredients, which are then boiled slowly and for a long time. As calomel and cinnabar are mercurials, and as mercury is the most effective agent in the treatment of syphilis, this is the only part of the prescription that would seem to be written with a serious intention. According to our usual notions of chemistry, however, it is difficult to see how either the calomel or the cinnabar could reach the patient, as they are both insoluble, and are tied up in a linen bag, and are retained in the dregs after straining off the decoctions. Furthermore, by the ordinary tests, no mercury can be shown to be present in the finished decoction. Arguments based on these facts were of such weight both with pharmacists and physicians that all mercurials are left out of Zittmann's decoction as ordered in the German Pharmacopeia, and with us also, the compound decoction of sarsaparilla contains no mercury.

I shall here take the opportunity to relate an incident that occurred at a meeting of the International Dermatological Congress held recently in New York.

Doctor Veiel of Canstatt had occasion, during some phase of a discussion on the treatment of syphilis, to refer to the use of Zittmann's decoction. On afterwards meeting the Doctor I thanked him for having praised an old friend. He inquired, "Whom?" I said, "Zittmann's decoction." "Yes, yes," he said eagerly, "that is an admirable though much neglected remedy, and care should be exercised to have it prepared in the old way and with mercury." He then went on to tell me that recently through electrolysis mercury had been demonstrated as present in Zittmann's decoction, and in a very easily digestible form, as the albuminate. The long slow boiling changes some of the calomel and cinnabar into the albuminate, and it may be that the saponin of the sarsaparilla aids in the transition. It is most interesting to find that in the course of time,

even from a chemical point of view, the observations of the old clinicians have been justified.

We have therefore in this preparation senna that acts on the intestinal glands as a laxative, sarsaparilla that acts as an accelerator of exchange on many glands and tissues of the body, notably on the skin. This action on the skin is shown by increased perspiration, and this effect is heightened by keeping the patient in bed, and giving the decoction warm. A just idea of the value of acceleration of exchange in the body may, we think, be obtained by studying the sinister effects of the slowing down of the nutritive processes as elucidated so ably by Bouchard. In addition to senna and sarsaparilla Zittmann's decoction contains a very easily assimilable form of mercury, and these ingredients probably account for the beneficent effects often observed following the use of this medicament. The rest of the drugs entering into the decoction probably only act as flavors and carminatives to hide the nauseating taste, or to prevent the griping effect of the senna.

It is important to instruct the pharmacist to prepare this decoction according to the old rules. Mercury for instance must not be omitted, and until a better way is actually demonstrated, it should be added as cinnabar and calomel together with alum and sugar in the much ridiculed linen bag. The chemists and pharmacists have already done enough harm in this direction only to find that the stone that the builders rejected has now become the head of the corner. In speaking of the alleged insolubility of calomel and deductions drawn from it in the practice of medicine, Dr. W. S. Franklin recently drew my attention to an interesting observation on the use of calomel powder in phlyctenular keratitis. Calomel has long been used in this disease; and as it is insoluble, some men, chemically inclined, asserted that its sole effect was that of a smooth bland powder. To test this, very finely powdered glass was used instead of calomel, but clinically it was found not to answer. In all probability the secretions of the eye act on the calomel liberating a soluble salt, that acts beneficially on the disease.

The decoction should be made at a simmering heat, as a slow fire is much better than an intense one to extract the principles out of the sarsaparilla. The length of time in boiling must not be shortened, as time must be an important factor in forming the albuminate of mercury from the calomel and the cinnabar.

Alcoholic extracts must not be used in making the decoction, as, for instance, the saponin of sarsaparilla is not soluble in alco-

hol, and its value would therefore be lost in any such procedure. One may give these instructions to a druggist, but the next thing on the program is to get the instructions fulfilled. This is especially difficult if the apothecary is over clever and enterprising. Then the only remedy seems to be to sit over him with a cocked pistol in your hand while the necessary steeping and boiling is being carried out.

It is not contended that this medicament is as powerful an antisyphilitic as either mercury or iodid of potash as ordinarily given, but it will undoubtedly often help one out of a very tight place when other remedies fail. In malignant syphilis, for instance, when mercury as ordinarily given fails to control, and when iodid of potash disagrees with the stomach, one is indeed in a dilemma out of which Zittmann's decoction may help one brilliantly. The following is an example:

A young man acquired a sore that ulcerated so freely and so deeply and with so little induration as to be taken by experienced men for a chancroid. In due time a roseolar rash appeared, quickly followed by a deeply ulcerating ecthymatous eruption. From this on for four or five years the disease manifested itself in most persistently malignant ways, in the skin, mucous membranes, and internal organs. He had at one time, dulness over the right apex with extreme emaciation, but without cough or the presence of tubercle bacilli in the sputum. He, at another time, had marked enlargement of the liver with albumen and casts in his urine. He had also most persistent deep mucous patches in his mouth, and he had an orchitis followed by atrophic induration. Throughout his illness the patient was pale, thin, and decrepit looking, and probably lacked power to form sufficient anti-bodies to combat the disease. I, as well as many others, used mercury by inunction, by intramuscular injection, intravenously and by the mouth, and in such dosage as to cause gingivitis and severe abdominal cramps. The lesions under this vigorous treatment would slowly and reluctantly recede, to recur almost immediately when the severe symptoms of mercurialism would subside. Iodid of potash would also slowly drive the symptoms back, but in a short time it would so disagree with the patient's stomach as to compel the cessation of the drug.

It was in an effort to relieve this disastrous state of affairs that a plan of treatment was hit upon that at least gave the patient relief from the torment of his disease, with very little distress from medication. A ten or twenty grain powder of iodonucleoid with

four ounces of the weak and four ounces of the strong Zittmann's decoction after each meal would, in a few days cause a marked change for the better in any luetic symptoms he might have.

Iodonucleoid is an organic combination of iodine probably very similar to the iodid of starch so highly recommended by McCall Anderson.

It is interesting also to note, what has long been known, that mercury and iodid of potash in their usual modes of administration regularly disagree with patients having malignant syphilis. This curious fact has recently been commented upon both by Neisser and by Petrini de Galatz[1].

Some years ago, in our State Society I remember Dr. Granville MacGowan of Los Angeles presented a case of malignant syphilis where both specifics failed, and where the patient rapidly recovered under the administration of Zittmann's decoction.[2]

Zittmann's decoction may be given also as a mild alternative between courses of inunctions or injections of mercury, or after the prolonged administration of iodid of potash. It is also valuable in relieving those old torpid livers that have been devastated by syphilis, and bombarded by all the inventions known to the cleverest of bartenders. Zittmann's decoction, well made and judiciously taken, will often get an unexpected amount of good work out of those old hepatic and intestinal glands, and will often enable the patient to enjoy many a goodc ocktail and a corresponding number of fine stories.

In closing I wish again to say a few words on chemistry and of its influence on the practice of medicine. That chemistry has done infinite good to the practice of medicine there can be no doubt, and furthermore the hope for future advance lies largely along chemical lines. What is objected to is subserviency to chemistry, and often to men who never saw a patient. It is difficult and discriminating work to try to determine if a given medicament is doing good to a patient, but that is what a physician is for, and that is why the practice of medicine is an art and not a science.

1 *Note sur un cas de tertiarisme précoce* par M. le Prof. Petrini de Galatz, *Ann. d. Mal. Vén.,* Dec. 1907.

2 A case of Malignant Syphilis Cured by Zittmann's Decoction, Granville MacGowan, M. D., *Journal of Cutaneous and Genito-Urinary Diseases,* March, 1901.

SOME REMARKS ON THE PROVISIONAL NOMENCLATURE OF THE AMERICAN DERMATOLOGICAL ASSOCIATION.

By Achilles Rose, M D., New York City.

BY request of one of the members of the American Dermatological Association, I have read the "Provisional Nomenclature" of this Association with a view to making suggestions. I find that most of the terms printed on a list given to me are perfectly correct, that a few are hybrid, or corrupt, or grammatically incorrect, and I wish to point out the deficiencies which I have noticed.

Acne is a name which has puzzled the lexicographers who tried to give the etymology. The word exists in no other but the medical language; it seems to me that it is a corruption of the Greek word ἀχμαι; ἡ ἀχμή is the culmination, αἱ ἀχμαί the critical signs of life, and ἀχμαι is what we call acne.

Actinomycosis is ungrammatical. The genitive of μύκης is μύκητος, the correct form is therefore actinomycetosis; this refers also to another word which I find on the list, namely, blastomycosis recta blastomycetosis.

Cellulitis.—This is one of the common barbarous hybrids of the abominable appendicitis class. The cell is κύτταρον, the proper one-language word would be cyttaritis.

Cystus.—If this word shall be the Latinized, κύστις (Cyst), then it is ungrammatical, because in Latinizing a Greek word we can not change the gender.

Dermatitis actinica.—Actinica is supposed to be Latinized Greek, but even if such a construction were permissible, the term dermatitis actinica might be misleading, it could be understood as meaning dermatitis of a radical form, but not, as is intended, dermatitis caused by rays. Actinodermatitis, I think, would answer. By no means should radio-dermatitis be employed except when dermatitis caused by radium is meant.

Folliculitis is one of the appendicitis atrocities. Follicle is θυλάκιον. The proper name would be thylacitis.

Keratosis.—The word existed in medical nomenclature outside of Greece, perhaps, for one century, but it is ridiculous, a word for a

funny paper, but not for scientific nomenclature; its meaning refers to marital infidelity. The proper term is keratoplastia.

Lymphangiectasis is ungrammatical, because a preposition cannot be placed in the middle of a word. Let us write lymphangoectasis. I am at loss, however, why we say lymph instead of lemph, from the original λέμφος.

Morbilli is correct; the Greeks call it Hilara.

Melanodermia.—I cannot understand the formation dermia.

Pediculosis is a corruption; we have to say either morbus pedicularis or phthiriasis.

Tuberculosis is a barbarous word. Tubercle is φυμάτιον and the Greeks call the disease in question φυματίωσις

SOCIETY TRANSACTIONS.

BOSTON DERMATOLOGICAL SOCIETY.

May Meeting.

Dr. C. M. Smith in the Chair.

Maculae Atrophicae. Presented by Dr. F. S. Burns.

This young woman has had a morbid process on the skin of the back of her neck for about a year and a half. On that region there can be seen a circumscribed, white, macular patch two inches in diameter. The lesion is moderately firm but not raised. Portions of the periphery of the patch seem a little elevated, but this is due rather to difference in consistence than to actual elevation. The surface of the affected part is of a dull white hue, with a dry, somewhat parchment-like appearance. Scattered about the periphery of the major lesion are numerous small, white satellite macules, pinhead to slightly larger in size. At the periphery of the principal lesion there is a suggestion of a faint pink areola.

The patient states that the process began about a year and a half ago as a few small white spots, which increased in size, coalesced, and finally formed the present picture. The skin elsewhere is normal.

Histological examination of one of the smaller lesions corresponded closely with the observation of Sherwell and Johnston in a case of similar clinical appearance. The rete mucosum was atrophied, consisting only of a few rows of granular and partially cornified epithelial cells, with complete disappearance of the interpapillary processes. The papillary layer was atrophied. The collagenous bundles were degener- has always been a prominent sypmtom of the affection.

Discussion: Clinically the process resembled atrophy rather than hypertrophy, therefore the designation morphœa seemed inappropriate. White spot disease, too, was thought scarcely a sufficiently descriptive title, as it conveyed no idea of its nature. In view of somewhat variable pathological findings in apparently the same clinical process, it would seem well for the present to withhold any distinctive name from which, so far as we now know, is but a localized atrophic process in the skin of idiopathic origin.

Urticaria pigmentosa. Presented by Dr. John T. Bowen.

Helen S., æt 4 years. The cutaneous affection, on account of which this child is shown, is said to have begun a few months after birth. The process has gradually extended, though as to the initial appearances on the skin the parents can throw little light. The body and limbs are profusely covered with light brown macules and plaques, so closely set that it is only here and there that an area of normal skin can be seen. There

is considerable pigmentation about the hairy border of the scalp. Light friction quickly works characteristic pinkish white wheals. Pruritus has always been a prominent symptom of the affection.

Discussion: Urticaria pigmentosa was the accepted diagnosis of this case.

Impetigo (Bockhardt type). Presented by Dr. F. S. Burns.

Mary G., æt 47, married. A year ago this patient first came under observation for a scalp affection similar in appearance to the process now present on the scalp. At that time there were numerous lesions scattered over both temporal regions, consisting of small pustules, many of which were pierced by hairs. Under an ointment of salicylic acid and resorcin the lesions healed in two weeks. Five months later the affection began to reappear on the same regions, persisting till now, as she has not taken the trouble to treat it. The present outbreak consists of numerous small pustules, a majority of which are pierced by hairs. On healing, no scars are left by the lesions.

Discussion: Besides folliculitis and its subdivision, the impetigo of Bockhardt, the possibility of acne varioliformis was considered. As the affection under discussion was confined to the scalp, and healed without leaving cicatrices, there remained little to support the question of acne varioliformis.

Urticaria bullosa. Presented by Dr. H. P. Towle.

This boy, who is four years of age, has had attacks similar to the present one every year for the past three years, beginning in the spring and lasting through the summer. On the body and limbs the eruption begins as a red raised spot, like a mosquito bite, sometimes with a small central vesicle, accompanied by itching. The individual lesions last a few days, and for two to four weeks are succeeded by new crops. A period of remission then occurs, later to be again succeeded by another eruption. The longest free interval has been one month. Coincidently with the appearance of these lesions on the body and extremities, vesicles, which quickly become bullæ, appear upon the soles and sides of the feet and never anywhere else.

Discussion: The affections differentially considered in this case were: urticaria bullosa, hydro æstivale and dermatitis herpetiformis. Urticaria of bullous type was thought to best explain the picture presented.

Epithelioma treated under X-rays. Presented by Dr. F. S. Burns.

This patient (a man 56 years of age) shows a cicatrix on the left side of his face near the ear. It is circumscribed, about an inch in diameter, smooth, soft, and a light pinkish red color. This cicatrix is the site of an epithelioma which was healed eight years ago under X-rays. Two years ago another epithelioma developed on the right temporal region, encroaching upon the antitragus. This lesion has progressively grown from an indefinite scaling pea-sized papule to its present size (two inches

in diameter). The lesion is superficial, with indurated and ulcerating borders and a cicatrical center. It is proposed that the lesion be at once treated by X-rays.

Dermatitis Recurrens (Crocker). Presented by Dr. H. P. Towle.

This case is evidently etiologically allied to hydroa vacciniforme. It differs clinically in that it began in adult life and has never been accompanied by scarring. The patient is a woman, 42 years of age, and by occupation a cook.

Eighteen years ago she began to have recurrent attacks of swelling of the exposed parts, which were in every way similar to the present one. For five years exposure to the sun, summer or winter, was followed by redness and swelling of the face and hands. Cold aggravated the attacks, but did not induce them, while artificial heat had no effect upon them. Finally the attacks ceased, the intermission lasting until four years ago, when they began again and have continued ever since. Seven years ago she began to have what she calls "nervous attacks." For two or three days there would be irritability, insomnia, and a constant feeling of impending disaster. After a few days of calm another nervous attack would come on. This continued for two years, when the attacks ceased and have never recurred. One year after the last attack the skin became for the second time susceptible to sunlight. For the past four years exposure to sunlight for twenty to thirty minutes has been followed within a few hours by redness and swelling. In the beginning, the susceptibility was confined to spring and summer, but during the past two years reaction in the skin has followed exposure at all seasons. A few hours after exposure the skin becomes red and then swells. In a day or two the swelling subsides, and for about a week is followed by slight desquamation. She states that the skin is now so susceptible to the action of light that quite mild exposure is sufficient to cause redness. The general health has been good throughout, and except for very mild gastric symptoms she complains of nothing.

The patient first came to the Out-Patient Department of the Massachusetts General Hospital November 8, 1905, when, according to the records, her whole face was slightly swollen. There was also a blotchy erythema about the lips, which suggested the initial stage of herpes simplex. A week later all that remained was a slight redness under the right eye. She was not seen again until April, 1907, when she returned to say that the attacks still continued and were even increasing in intensity. Attempts to ward off the effect of exposure by wearing white and blue veils had been tried, but without success. At the time of this visit her face showed no traces of redness or swelling, but on the following day she returned with marked reaction on the left side of the neck, the ear, forehead, and left cheek. The left eye was half closed on account

of the swelling. She stated that on her way home the day before she was obliged to wait for a car twenty minutes, and stood with the left side towards the sun. Soon after her arrival home the above mentioned parts became red and swelled. Near the corners of the mouth were a few small vesicles.

Discussion: Hydroa æstivale of mind grade was thought a preferable designation for the above described condition, from which it apparently differs only in degree. Etiologically the conditions are allied so closely that a separate and perhaps confusing distinction seems scarcely warranted.

F. S. Burns, Secretary.

MANHATTAN DERMATOLOGICAL SOCIETY.

Sixtieth Regular Meeting, May 3, 1907.

Dr. Edward Pisko, Presiding.

Paget's Disease. By Dr. W. S. Gottheil.

Mrs. Dora B., 42. Four years ago trouble began in her right breast; has had several children, the youngest now six years old, but never any fissures or inflammation of the breast. The ulcerative process involves the nipple, the upper half of which is deeply eroded and the lower part composed of a dense mass of cicatricial tissue. Above the nipple and confluent with it is an irregularly circular, bright red eroded area, shiny on its surface, about an inch in diameter. The circinate border is infiltrated and distinctly waxy. The lesion is quite insensitive and its entire base is markedly indurated. No axillary glandular involvement, and none of the deep tissues of the glands are affected. The case was therefore very suitable for the caustic treatment; amputation was unnecessary, and the X-ray entirely too slow.

In the discussion Dr. Geyser advocated the use of the tube. In so slow a process there was always time for more radical measures, if that failed.

Lichen Planus Gyratus. By Dr. I. P. Oberndorfer.

N. M., male, 83. Eruption on the back of the left leg first noticed eighteen months ago; soon after a similar lesion appeared on the corresponding area of the right leg. Steady progression of the local lesions; much itching at times; no improvement under treatment. The typical papules, situated on the upper and inner aspects of the legs and knees, are arranged in gyrate forms, the center of each area being normal, and the margins composed of thin bands of confluent and discrete lesions. The rest of the body is unaffected, with the exception of a couple of small lesions of circular shape on the small of the back.

In the discussion of the case Dr. Ochs called attention to the benefit derived from the application of pure carbolic acid once a week to lichen lesions.

Granulosis Rubra Nasi with General Hyperidrosis. By Dr. L. Oulmann

K. F., male, 12, has suffered from the present affection since his eighth year; a younger brother is similarly afflicted. There is a general hyperidrosis, which is so severe in summer that he is unable to do his school work in warm weather. The nose is especially affected; the patient has to dry it every few minutes during the day. The entire organ is reddened, of a distinctly lower temperature than the rest of the skin, and is studded with a large number of minute white vesicles which, when pricked, permit a droplet of clear sweat to escape. The reporter regards the case as a typical example of the disease described by Jadassohn and Luithlen in 1900, in which the lesion consisted of a permanent enlargement of the sweat glands and their ducts, combined with dilatation of the vessels, œdema and infiltration as noted later in Pick's case. The combination of a general hyperidrosis was of interest, as also its occurrence in two members of the same family.

Dr. Weiss regarded the case as one of stagnation erythema combined with hyperidrosis, very close to the lupus pernio of the Continental writers. Dr. Gottheil stated that the recorded cases of granulosis described a different hypertrophic condition, and thought the case a chronic rosacea with involvement of the sweat glands and their ducts.

Cheiropompholyx, treated with X-ray. By Dr. A. C. Geyser.

Miss B. N., 18. One year ago a group of large vesicles appeared on her left hand, which dried up into impetiginius crusts; at various times later similar lesions appeared at the same place. There have also been vesicles in groups along the distribution of the ulnar nerve on the fingers and back of the left hand. Two weeks ago there appeared for the first time similar lesions upon the right hand. All the lesions have been but slightly painful, but markedly puriginous; there has been some erythema of the tissues in which the vesicles appeared. The treatment has been exclusively with the X-ray, under which the vesicles have dried up and disappeared.

Dr. Abrahams regards the case as being a vesicular eczema, and the present mild dermatitis as due entirely to the X-ray. Dr. Gottheil understood by cheiropompholyx or pompholyx the appearance of large vesicular or bullous lesions on a non-inflammatory base, entirely without involvement of the neighboring skin, and apparently more closely related to benign pemphigus than to other vesicular dermatoses. The grouping, the itching, the repeated attacks in the same location, and the signs of dermatitis indubitably present would lead him to regard the case as one of dermatitis herpetiformis of the vesiculo-bullous type. Dr. Geyser called attention to the immediate relief of the puritus by the X-ray as a symptomatic therapeutic measure; it was far more effective than ordinary local applications.

Recurrent Gummata of the Epididymis. By Dr. M. B. Parounagian.

H. R., 32. Urethritis and chancre nine years ago, followed by secondaries; treatment only while the symptoms lasted. Since then has had several attacks of urethritis, and a suppurative inguinal adenitis some four years ago. Eleven months ago he applied for relief from a "swollen testicle." Both testicle and epididymis on the right side were swollen and nodular, and not very sensitive; the condition in no way resembled a gonococcal infection, though he had a discharge; and as he had been treated for lues in the past, he was put upon the same treatment again. There was rapid improvement and the patient disappeared again.

On April 2 of this year complaining again of swollen testicle and "abscess." The swelling started again two weeks before in the testicle that had been previously affected; it had gradually increased and had finally broken; there had been little pain. Examination showed the entire right testicle and epididymis fused into one large indurated mass and adherent to the scrotal tissues. Posteriorly and at the lower part of the organ were two sinuses, from one of which there was a discharge of thick yellowish-green pus. Rectal examination showed normal prostate and seminal vesicles.

In the discussion Dr. Oulmann called attention to the fact that the epididymis was the organ chiefly affected; the testicle itself, although more or less fused with that organ, was much less affected.

Primary gumma of the epididymis was a comparatively rare condition.

Generalized Lichen Planus and Psoriasis. By Dr. W. S. Gottheil.

This patient, male, 54, has been under more or less continuous observation since the beginning of 1901, suffering from a chronic inveterate psoriasis. He has had it nearly all his life; has never been entirely free from it, in spite of the most varied treatment at the hands of many different men, and suffers greatly every winter, when the eruption usually extends over the entire body, even the palms, soles, scalp and face being affected.

These facts are mentioned to emphasize the point that the patient, of considerable intelligence, has become quite conversant with the symptomatology of his disease, knows all the various remedies commonly employed for its relief and their effects and has naturally become an expert in regard to it as it appears in his own particular case. From 1901 to date he has been under more or less irregular treatment of various kinds, including phototherapy, radio-therapy, thyroid and all the usual internal and external remedies with only temporary and partial effects.

In June, 1901, he had a marked attack of erythema multiforme, many of the lesions on the legs and arms being very distinctly of the iris variety. He himself first called my attention to the different nature of these lesions from his usual efflorescences. In May, 1906, when I had not treated or seen him for many months, he appeared complaining of a new eruption.

He stated that the new spots were very itchy, which his psoriatic lesions never were, and that they were of a different color and not scaly. Examination showed that scattered over his entire body, intermingled with his ordinary and characteristic psoriasis plaques, were the typical lesions of a very extensive lichen planus. On the legs, especially, the lichen papules were confluent in many places, forming corneous patches that were evidently intensely pruriginous. Under sodium cacodylate internally and bichloride-carbolic applications externally, the lichen planus slowly improved in the course of months, leaving the psoriatic lesions as before; and towards the end of 1906, when I last saw the patient during that attack he was in about his usual psoriatic winter condition. In May of this year he reappeared with a new outbreak of the lichen, which has persisted with but little abatement until the present time. Both varieties of lesions are intermingled over the entire body, but in certain localities, as on the elbows and knees, the pink, scaly psoriasis efflorescences are so prominent that examination of them alone would lead to no other diagnosis; on the other hand, on the thighs and upper forearms there are areas where all the lesions are rectangular, purplish, flattened, shiny and non-scaling, being typical lichen planus lesions. The patient can distinguish them from one another perfectly well; he can pick out a psoriatic mass as part of the eruption that he has had for over forty years, and which does not itch at all, and in its immediate neighborhood point out a lichen lesion that itches intensely and is of the new eruption. Apparent transition forms are not infrequent; many lesions can be found about which it would be difficult to decide whether they are partly cornified lichens or retrogressing psoriasis lesions. I have had occasion a year or so ago to present a psoriatic patient here who had had a typical dermatitis exfoliativa for at least a couple of years, and was treated for it at the City Hospital, and which gradually changed into the commoner disease. This is the first case, however, that I have encountered, with a combination of psoriasis and generalised lichen planus.

Subungual Verruca. By Dr. B. F. Ochs.

Becky G., aet. 7, came to the clinic a week ago for a "sore" on the third finger of her right hand. On the tip of the finger, and involving the anterior outer edge of the nail, was a soft, hypertrophic, bean-sized mass, very tender to the touch and bleeding easily. When the accumulated blood crusts, detritus, and dirt were cleaned away the lesion was found to be a grayish-red papilliform mass, the seat of which was under the nail and occupying about one-third of its area. It is seated at the root of the nail, occupying the entire region of the lunula, and forming a brownish red, hypertrophic, papillary mass. The skin around the nail bed is swollen and red, and the proximal edge of the nail is raised and loosened from its bed. It is very evident that the growth, if unchecked, will cause complete shedding of the nail. There is another typical

verruca on the side of the index finger of the same hand a short distance from the edge of the falx.

In the discussion Drs. Oberndorfer, Cocks, Oulmann, and Parounagian were inclined to regard the case as an onychia with hypertrophic granulations. Dr. Gottheil agreed with the presenter of the case. He had seen the case before and watched the development of the verrucous growth, beginning at the falx and gradually spreading on the nail bed, and undermining and loosening the nail. The process in its early stages was seen in the lesion on the index finger.

M. B. Parounagian, M. D., Secretary.

THE PHILADELPHIA DERMATOLOGICAL SOCIETY.

The regular monthly meeting of the Philadelphia Dermatological Society was held at the Medico-Chirurgical Hospital, on Tuesday evening, December 18, 1907, at 8:30 o'clock. Dr. M. B. Hartzell, presiding.

A case of haemorrhagic herpes zoster. Presented by Dr. Knowles, through the courtesy of Dr. Stelwagon. The patient was a male, forty years of age. The man was in poor physical condition, using alcohol in excess, and living a life of exposure. His right arm had been amputated two years previously, because of a traumatism. The zoster seemed to follow two different nerves, as it not only showed the typical vesicular groups, over the right upper back and chest, but also in the right axilla, and anteriorly and posteriorly on the upper arm. Numerous groups of these vesicles became, a few days after the start of the zoster, hæmorrhagic. The original injury to the right arm was suggested as a predisposing factor. Pain, burning, and itching were markedly present.

An unusually extensive case of tinea versicolor was exhibited by Dr. Dye. The patient was a man of forty-eight had noted this condition for some years. The chest, abdomen, thighs, and the entire back were involved. The neck, cheeks, and chin were also sparingly attacked. The eruption was typical in every respect, excepting that it was somewhat inflammatory. It was remarked that the face is usually exempt in this disease.

An atypical case of lupus erythematosus was shown by Dr. Hirschler, for Dr. Schamberg. The patient was a negress, married, and had had this condition for twelve years. On the right side of the neck and face is noted a sharply marginated patch, with an elevated and an infiltrated border. The patch covers almost the entire side of the face; the skin is thickened, reddish, and shows the loss of normal pigment; islets of pigment are, however, seen throughout the patch. Small, superficial, and scaly patches are also seen on the nose, the right ear, and posterior to the left ear. About a year or so ago the patch received vigorous X-ray treatment in New York, resulting in an enlargement of the lesion. She has been receiving within the last few months injections of tuberculin,

in doses varying from one-eighteen-hundredth to one thousandth of a milligram. The injections are followed by fever, chills, and other signs of a constitutional reaction. Increased redness is also noted in the affected areas, following this method of treatment. There has been undoubted improvement since the use of this agent; pigment is being gradually restored. Quinine was administered in large doses, but had to be stopped because of the production of a generalized exfoliative dermatitis. Those present discussed the moted question, of the relationship of lupus erythematosus to the true tuberculosis of the skin.

A case for diagnosis. Presented by Dr. Pfahler. The patient was a robust male of sixty-four years. Eight months ago several furuncular like lesions appeared on the neck below the chin. These tumors have increased in size, until now there are six walnut-size swellings. These are boggy and markedly inflammatory. Some of the hairs have fallen out in the involved areas and the others are easily depilated. The entire neck is densely infiltrated and erysipelatous in appearance. A purulent and slightly blood tinged discharge exudes from one of these tumors, which had been incised. The patient's health is unimpaired. The hairs or the discharge had not been examined microscopically. Several diagnoses were suggested—sarcoma, malignant tinea sycosis, gummatous syphilid, and actinomycosis. A thorough microscopical examination was advised, to be followed, in the event of a negative result, by anti-syphilitic treatment.

SECTION ON DERMATOLOGY.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, Held December 3, 1907.

Dr. A. R. Robinson in the chair.

Sycosis Treated by the X-ray. Presented by Dr. Howard Fox.

The patient is thirty-three years old, born in the United States, married, a clerk by profession. The disase first appeared ten years ago, and persisted obstinately until treatment by the X-ray was begun. The disease has always been extensive, involving the cheeks, and extending down upon the neck. It has occasioned great discomfort in addition to being very unsightly. X-ray treatment was begun a year ago, about thirty exposures having been given during this time. The beard appears to be permanently epilated and the chin and neck bronzed by the action of the ray. Although a few lesions still remain, the improvement has been very great.

Lupus Erythematosus, greatly improved by the X-ray. Presented by Dr. A. Schuyler Clark.

The patient is a woman forty-three years of age, married twenty-

three years. There is no tubercular history in herself or her family, and she and her children have always been healthy. The present trouble began about a year and a half ago, when she first noticed a red mark in front of the right ear. This increased in size up to the time when treatment was begun five months ago, when it was a typical patch of lupus erythematosus the size of a quarter. She received one exposure with a moderately low vacuum tube close enough to produce a first degree burn, which healed in four weeks, leaving the patient apparently without disease, and with an excellent cosmetic effect.

Lupus Vulgaris healed by the X-ray.

Presented by Dr. A. Schuyler Clark.

The patient is a male, thirty years of age, Russian. He had an injury to the left temple twenty-one years ago which was slow in healing, but which did heal completely. Three and a half years ago he noticed a red spot in front of the left ear, which had grown, when he applied for treatment, to be two inches by an inch and a half, and was a typical patch of lupus vulgaris, with considerable thickening and elevation above the surrounding skin. It was exposed four times to the X-ray—twice at a considerable distance with a high vacuum tube for a considerable length of time, and the last two times with a low vacuum tube at close range, with the idea of getting a decided reaction. He developed a moderate burn in four weeks, which has slowly healed, except a small spot overlying the zygoma. A level and very good scar remains, with no trace of disease.

Epithelioma of the Lip and Cheek, greatly improved by the X-ray.

Presented by Dr. Trimble.

Case previously shown before the New York Dermatological Society by Dr. Fordyce, q. v.

Dr. Clark said that in his opinion the gland under the jaw was enlarged, and should be excised.

Dr. Robinson thought the result in this case was excellent. There was still a deep-seated sub-epidermal mass of cancer near the angle of the mouth, and for the treatment of it he would advise injuring or destroying the overlying epidermis and then applying X-rays to the injured area; otherwise he doubted if the rays would be effective. In this case he did not find any invasion of the submaxillary glands, and he did not think their removal necessary, a complete removal or destruction *in situ* of the primary growth being all that was required. When the glands are invaded, the lymph channels between the primary growth and the glands must contain pathological epithelial cells, hence removal of the glands alone without destroying these cells is not a removal of the disease, and a reappearance is inevitable. Dr. Robinson would swab the invaded area during the operation with an agent to destroy nuclei especially, and not treat the wound with the object of union without suppuration.

Dr. Trimble, closing the discussion, said that he agreed with the chairman in his expression of the very bad prognosis of all cases of epithelioma of the lower lip in which the sub-maxillary glands are involved. However, he believed this case to be one of the rodent ulcer type, with practically no glandular involve-

ment, and he hoped to prevent a recurrence by keeping the patient under observation, and occasionally exposing the lesion to the X-ray.

Dermatrophia linearis. Presented by Dr. Howard Fox.

The patient is eighteen years old, single, born in the United States, a collector by occupation. Seven months ago he accidentally discovered the lesions on the back, while looking in a mirror. They have occasioned no subjective symptoms whatever. He can give no cause for their appearance: he has not received any traumatism to his knowledge, nor has he engaged in any severe muscular exercise. He has always enjoyed good health. Four months ago he contracted syphilis.

Over the mid-dorsal region are five striæ, horizontally placed, varying from two and a quarter to six inches in length, and from one-eighth to three-sixteenths of an inch in width. They are reddish in color, the redness disappearing on pressure and returning soon when pressure is removed. The surface of the lesions is furrowed, the furrows being at right angles to their long axis. By passing the finger lightly across the lesions a very slight elevation is detected at one or two points. There is certainly no visible elevation. When, however, the finger is passed across the lesions with pressure, the sensation of whipcords embedded in the skin is obtained. By careful palpation of the individual lesions, especially in their long axis, the sensation of a groove between two ridges is given. Upon the buttocks there are numerous striæ averaging half an inch in length, and one-sixteenth of an inch in width. They lie in an oblique direction from above downward and outward; they are reddish in color and wrinkled. The patient presents an induration on the penis, and a fading macular syphilide upon the trunk. It is only for the syphilitic infection that he applies for treatment, the lesions upon the back never having occasioned any inconvenience or apprehension.

Lupus Erythematosus of the Scalp. Presented by Dr. Howard Fox.

The patient is a factory girl twenty-four years old, single, born in Russia. She was always well till six years ago, when the eruption on the scalp first appeared. Scattered over the scalp there are now about fifteen bald areas varying in size from a bean to a quarter. They are for the most part smooth, slightly scaly in places, and somewhat depressed. Over the vertex the patches have coalesced to form a line running anteroposteriorly for six inches. Behind and above the ears are typical scaly patches of erythematous lupus.

Erythema recidivans urticans faciei in a hereditary syphilitic subject. Presented by Dr. Lapowski.

The patient is a woman thirty-five years old, married two years ago. She had a miscarriage three months after marriage. No family history could be obtained. Up to her ninth year she suffered with sores on various

portions of her body: face, lower and upper extremities. The ulcers on the extremities left round soft scars, and on the face longitudinal scars, traversing the region of the cheeks, from mouth corners to the ears, in various directions. She had a saddle nose. She was subject to convulsions in childhood. When twenty-eight years old—seven years ago—her upper lip swelled, the swelling lasting two weeks, and since that time the attacks of swelling have occurred several times during the year, affecting both cheeks and both lips. The attacks were in the beginning accompanied by severe headache, but in the last two years the headaches have diminished. In the beginning the swelling lasted several weeks, and disappeared, leaving no sign, but in the past two years the swelling does not entirely subside, and the attacks are repeated several times during the month. At present the ears, glabella, cheeks, and upper lip are involved. The urine has been examined repeatedly, but nothing abnormal could be detected—no albumen, indican, or casts were present. The patient has never been treated specifically.

Multiple Spontaneous Keloid. Presented by Dr. Lapowski.

The patient is a woman forty-two years of age, married. She has been five times pregnant. Her family and personal history are negative. On the right cheek is a soft, pedunculated, reddish, painless, pea-sized growth, which appeared thirty years ago. The growth is redder during the active period of menstruation, and in the past five years it has shown a tendency to enlarge. On the trunk and near the sacral region are four soft verruccæ, from a millet seed to a pea in size. On the sternum are two keloidal growths: the lower is cylindriform, and of fourteen years' duration; the upper and smaller is tubercular and appeared three months ago. Over the arms and trunk there are scattered eleven keloids of various sizes, from a pea to a large bean, and of different consistency. On the arms there are two red spots, remnants of a burn, upon soft pliable skin, with no macroscopical evidence of hardness. The cervix uteri is hard, scar-like, and pale. The patient states positively that the keloids appear on places where no injury occurred. They start as subcutaneous tubercles, which produce a desire for scratching; then gradually they increase in size, and when they reach the level of the skin, the itching subsides.

REVIEW
of
DERMATOLOGY AND SYPHILIS

Under the charge of A. D. Mewborn, M. D.

REVIEW OF PATHOLOGY.

Charles J. White, M. D., Boston.

Adenoma Sebaceum, A Case of So-called.

Krzysztalowicz. *Monatsh f. Prakt. Derm.* 1907, XLV, p. 1.

There are two varieties of this disease according to Krzysztalowicz. The first, characterized by symmetrical, usually single tumors which show a predilection for the scalp; the second, by more or less symmetrical and multiple tumors. The first type appears to be a true hypertrophy of the sebaceous glands which may undergo degeneration. The second seems to include various pathological deviations.

The author's present case consisted of numerous small, hard nodules which had existed on the patient's face since childhood. Some showed telangiectases, others yellow pigment, and other follicular openings.

Three tumors were excised and examined histologically.

The first showed many branching sebaceous glands and dilated follicles full of horny and sebaceous detritus with numerous bacteria. Some follicles were branching and elongated, others small and superficial. Collagen and elastin were normal despite a considerable infiltration and a dilatation of the superficial vessels.

The second nodule exhibited a sebaceous condition similar to that of the first, except that the follicles were less dilated. There was a more pronounced distension of the superficial vessels accompanied by a marked pigmentation in the papillæ. The collagenous and elastic structures consisted of more delicate fibrils than usual.

The third tumor presented groups of superficial and deep cells of various shapes and sizes, some resembling those of soft naevi (somewhat similar to rete elements), and here and there connecting directly with the epidermis. The non-epidermic cellular groups were at times isolated and at others in direct relation with vessels, follicles, sweat glands or between the collagenous bundles. Pigment was found free in the corium or within or without the cells of the epidermically related groups just described. Here also one noted a rarified condition of the elastic tissue which was otherwise normal. In this type the epidermis was stretched and the papillæ were sparse and some epidermic pigment was present.

Adenoma sebaceum is thus in reality a complex title and the world

recognizes four types: 1st. Caspary's sebaceous tumor. 2nd. Pringle's sebaceous, angiomatous and fibromatous mass. 3rd. Darier's angiomatous structure, and 4th. Perry's sweat gland naevous type. Thus we can account for the diverse nomenclature—adenoma sebaceum, naevus sebaceus, naevi vasculaires et verruqueux, naevi symétriques de la face, etc.

Xeroderma Pigmentosum, Concerning a Case of. By Vignolo-Lutati. *Montash. f. Prakt. Derm.* 1907, XLV, p. 21.

The original part of the paper is preceded by a description of the disease based upon the study of nearly one hundred references.

The writer's own case was that of an Italian girl of three years—a blonde, many of whose forebears had had red hair and whose parents were closely related before marriage. Three pieces of skin were excised for pathological investigation, the chief aim of which was to determine the origin of the pigment associated with the disease.

1. *Erythematous Plaque.* The superficial cutis presented the usual signs of inflammation. Incipient keratosis was noted in the sweat and sebaceous orifices. The boundary between epidermis and corium was not clearly defined. Collagen seemed normal but elastin was thin and stained poorly where the cellular invasion was most marked.

2. *Pigmented Plaque in Atrophic Skin.* The epidermis was thinned. Individually the stratum corneum was thicker than normal; the stratum granulosum was poorly developed; the stratum spinosum showed shrunken cells, while the protoplasmic fibrils and Herxheimer's spirals were practically gone. Pigment was present in the palisade layer, mostly intracellular. The papillæ were gone. The upper and middle layers of the cutis were poor in vessels and cells and thus resembled sclerosis in structure. Sebaceous glands and follicles had disappeared and only the remains of the sweat apparatus persisted. Muscular tissue was atrophied. Collagen was straight and compact; elastin regular and thin. Vessels were sparse and in some instances occluded. Pigment was present in cells and in lymph spaces. Where sclerosis was less marked there the inflammatory signs were present and there pigment was observed along the vessel walls, in the vascular lumen and in the endothelial cells.

From these data the author discusses the mooted question of the origin of pigment. He believes that epidermic pigment arises from epidermic cells through a bio-chemical change acting on the nucleus. He therefore does not believe that epidermic pigment is produced in the corium and brought to the epidermis by wandering cells. He believes still further that the pigment of the corium is produced by substances derived from the blood which react on the nuclei of the cells of the corium. He thus agrees with Unna and others who hold that epidermic and dermic coloring matter are of different origin and different chemical composition. In xeroderma pigmentosum these substances are produced through the inflammatory action of the sun on a predisposed skin and the writer

then promulgates the interesting theory that this special predisposition lies in the pathological condition of the body cells due to the blood relationship of the parents.

In conclusion the author states that all the changes of sclerosis, atrophy and pigmentation are secondary to hyperæmic changes in the corium induced by the chemical rays of the sun.

Epidermic Pigment, Experimental Contribution to the Origin of.

Hellmich-Graudenz. *Monatsh. f. Prakt. Derm.* 1907, XLV, p. 124.

This contribution is a purely experimental exposition of the theoretical ideas of the previous writer on the subject of the birth of epidermic pigment. The article is introduced by a chronological résumé of the author's predecessors in this field of research, beginning with G. Simon, who in 1841, believed that epidermic coloring matter was derived from dark nuclei in the palisade layer of the rete—curiously enough the belief which exists to-day. Through this long list of more than thirty investigators the ideas see-saw back and forth between the epidermic and the dermic genesis of the pigment, but the majority agree with Simon and the present writer that the former view is correct.

Hellmich-Graudenz shaved the back of two rabbits and left them in the sun from morning until night. On the fifth day the skin became grey, on the eighth day black grey, and on the sixteenth day the integument once white was now black. The hair grew very slowly; on the tenth day it was one-half c.m. long, and at the end of three weeks the longest hairs were only one centimeter in length and were darker than their normal neighbors. After three weeks the shaved portion of the skin began to grow lighter, reaching the normal hue at the expiration of seven weeks. The hairs, however, remained more pigmented than originally, but only at their distal ends.

During the period of exposure the writer excised about 1 cm. of the skin every day and after staining according to the Pappenheim-Unna method examined the sections microscopically. On the third day the epidermic cells began to show abnormalities, including an increase of the nucleolar substance. There were as many as eight nucleoli, or fewer and larger nucleoli, or finally a nucleolus which accupied nearly the whole of the nuclear space. These nucleoli were not round, but crescentic, cornered, long or drum-shaped. The nuclei in turn assumed corresponding deformities or showed protuberances. Accompanying these nuclear disturbances the cell protoplasm became shrunken.

On the third day also was observed an exit of nucleolar substance from the nucleus into or even out of the cell and this substance became pigment. Emerging from the nucleus the nucleoli appeared as granules near the edge of the cell and later extended into the intercellular channels often as long rows of dots. These chromatophores lay mostly in the

palisade layer and spread toward the cutis. The pigmentary granules sometimes obscured the nucleus entirely.

About the seventh day these intermediary figures had disappeared and only pigment remained. From the ninth day a sudden change occurred—marked pigmentation, macro- and microscopically. Chromatophores and unbranched pigment cells (the latter far more numerous) abound, but the nucleolar origin was still everywhere demonstrable. From the twelfth day the pigment was seen in the stratum corneum and cell boundaries were hidden.

From these experiments Hellmich-Graudenz deduces that the epidermis possesses the power of autochthonous pigment production and that as the mother substance of epidermic pigment one must look upon the nucleolar tissue.

A series of forty-seven prettily drawn and colored cellular figures closes this interesting article and convinces the reader of the truth of the author's assertions.

Atrophia Maculosa Cutis. Vignolo-Lutati. *Monatsh. f. Prakt. Derm.*, 1907, XLV, p. 329 and p. 404.

The author prefaces his original work by an historical statement concerning this rather disputed condition. The controversy has raged as to whether this condition should be considered as a separate entity or whether it is in reality a sequela of lupus erythematosus. Thibierge in 1891 started the discussion promulgating the latter view point, and Heuss and Oppenheim, Jadassohn, Nielsen, Du Castel, Besnier, Fournier and Salewski Mibelli, de Beurmann and Gougerot, Nicolas and Favre, Boikow and finally Beck have published contributions in favor of one or the other theory.

Vignolo-Lutati describes two personal cases in women beyond middle life in whom developed rapidly and spread slowly bandlike, round or oval plaques, white, glistening, cicatricial, sharply bounded, smooth, soft, movable and compressible. The newer lesions were surrounded by a pink slightly elevated periphery.

Under the microscope the pink periphery showed no epidermic changes. There was some cellular infiltration, especially about the follicles, glands, and vessels, which were more or less dilated. In the midcorium the perivascular infiltration was most marked and the connective tissue was rich in cells and somewhat disintegrated. This cellular infiltration was composed of small round cells, poor in protoplasm and big in nucleus, and occasional mastcells. There was endothelial thickening and some of the vessels were occluded.

The atrophic areas presented an epidermis thinner in all its layers. Rete plugs were shorter and narrower and in the center were quite gone. The rete cells were flattened and the intercellular spaces were narrowed. The derma showed sparse and horizontally distributed cells. The layers

were dense and follicles and muscles were wanting. Elastin seemed to disappear progressively as one approached the center of the area. The individual fibrils were short, thin, straight and poorly stained and least discernible where the inflammatory infiltration was most emphasized. These changes were most abundant in the upper and middle corium while the lowermost strata were but slightly affected.

These present pathological findings agree with the generally accepted ideas that inflammation comes first (clinically the erythematous stage) followed by the disappearance of elastin (clinically, the atrophic stage).

[There are many other details to this long paper, but they lie outside of the province of this department. Ref.]

Verrucae Plantares; their Prevalence in Boys and in Young Men and their Pathology. J. T. Bowen, *Bost. Med. and Surg. Jour.*, 1907, CLVII, p. 781.

The author was able to summarize twenty-four personal observations. The striking pathological characteristics were as follows:

Where warts are not subject to pressure they appear as a projection above the surface. Where, on the other hand, pressure is frequently present the structure burrows into the cutis and the adjacent epidermis hypertrophies.

The corium presents no particular deviations from the normal. The papillary projections are flattened in the center, but are much elongated and more or less horizontally placed at the periphery.

The epidermis exhibits certain peculiarities. At the periphery there is pronounced acanthosis, papillary enlargement, down-growth of the rete plugs and a very marked hyperkeratosis together with a great hyperplasia of the granular cells. As the center of the wart is approached a rather characteristic change is found—the middle rete cells become vacuolated and appear larger and rounder than their neighbors. This change may sometimes affect only clumps of cells. With this vacuolation is noted an early development of kerato-hyalin which is heaped up at the periphery of the cells. Above this peculiar area the horny layer reaches its maximum thickness and consists of imperfectly keratinized cells.

In a majority of the warts examined Bowen found peculiar protozoa-like bodies in many of the nuclei of the rete cells. They were small, round, highly refracting, sometimes centrally concave, sometimes crescentic bodies of equal size and closely connected with the vacuolization of the rete cells and disappeared at the level of the granular cells. They were found particularly in the greatly swollen nuclei, absorbed the acid dyes and thus were not to be confounded with the cell nuclei. The author feels that these bodies must be interpreted as some form of nuclear degeneration and not as protozoa.

Staining Method for Spirochaetes in Section. F. Proescher and W. C. White, *Jour. Am. Med. Ass.*, 1907, XLIX, p. 1988.

This method is so simple that it should be tried by everyone .

1. Harden in alcohol or formalin; the length of time is unimportant.

2. Imbed in paraffin and cut in usual way; or make frozen sections after hardening in hot formalin.

3. Stain in picric acid and acid fuchsin solution ten minutes. (This solution is composed of saturated aqueous picric acid, 99 cc. and saturated aqueous acid fuchsin, 1 cc.).

4. Differentiate in 20 % picric solution in 96 % alcohol 5 to 10 minutes.

5. Clear with xylol or oil origanum and mount.

The spirochaete is stained deep red, the fibrous tissue less deeply.

Adenocarcinoma Lenticulare Capillitii, A Case of. Kreibich. *Dermatolog. Zeitschr,* 1907, XIV, p. 651.

This rather unusual type of cancer developed on the scalp of a man of seventy years who had fallen on his head six months previously. The tumor appeared as a closely agglomerated mass of one-half-cheery-stone sized nodules on the right side of the scalp. The lesions were reddish and separated from each other by furrows out of which exuded an ill-smelling, bloody pus. The whole growth suggested a cauliflower and showed no normal skin or hair. The smaller lesions, which developed sparsely on the left side, had a somewhat hyaline, vesicular look. Cervical and supraclavicular glands accompanied the process.

Anatomically the new growth proved to be a tubular adenocarcinoma which was spreading along the lymph passages. The tumor cells were cubical and large and contained pale protoplasm and large, faint, vesicular nuclei. The tubular look was so strong that the whole mass simulated renal tissue. There was but little interlying connective tissue and no epidermic connections were anywhere visible, but the overlying skin was greatly altered by the upward pressure from the tumor mass below. Surrounding the new growths the vessels were widely dilated; this was especially true of the lymph channels. Cellular infiltration, mostly plasmatic, was not intense anywhere. Metastases were visible in the neck, forehead and accompanying lymph glands.

BOOK REVIEWS.

Diseases of the Rectum, W. C. Brinkerhoff, M. D. (sic.). Published by Orlan Publishing Co. (not incorporated), 1907.

This little volume is both quaint and interesting. It bears as its device the following aphorism: "There is no good reason why, in the treatment of hemorrhoids, commonly called piles, suffering should be added to suffering in order that suffering may be cured."

Similar gems are scattered with lavish hand throughout the pages that follow. Thus: "The payment of from thirty to fifty per cent. commission, by some surgeons, to physicians for surgical cases referred for operation, may have its influence in causing such frequent endorsement of the surgical operation for piles." Later we learn that the Brinkerhoff method of injection is the talisman to repel the surgeon and to eliminate his commission.

Many interesting case histories are narrated to illustrate this point. How touching is the simple faith embodied in the following statement! "One of the neighbors, a near relative of mine, stated . . . that she did hope I would be successful in the treatment of Mrs. H., as both she and her husband were very anxious that good results might follow and she be restored to health." And right noble was the response of Dr. B. Among other things he summarily dismissed a "thoughtless and revengeful physician and surgeon"—what a saving of commissions!—"who evidently was somewhat miffed," and by his presence alone soothed an attack of nervousness combined with too much 'Spirits Frumenti'." And since that day hysterical attacks (and "Spirits" too, let us hope) no more occur.

The volume is sumptuously illustrated with pictures of instruments closely resembling rectal specula, hypodermic needles, and hard rubber syringes, all bearing the name of good Dr. B. and bearing witness to the fact that a rose with any other initials would smell as sweet.

Syphilis and Tuberculosis. By Emile Sergent, Masson et Cie, Paris, 1907.

This treatise is a collection into one volume and a critical review of what may be termed the "advanced" French views upon the special relation of syphilis in the etiology of tuberculosis. The first part, entitled "Syphilis or Tuberculosis," is an admirable discussion of the differential diagnosis between syphilis and tuberculosis in different parts of the body, in the infant as well as in the adult. In this section the chapters upon bone, lung, and testicle are eminently sane and lucid, while for the rarer lesions of pleura, mediastinum, etc., many authors are quoted and instances cited.

The second and more important section studies the etiologic relationship of tuberculosis and syphilis. The author's views upon this subject are summed up as follows:

"The relationship between tuberculosis and syphilis is extremely intimate.

"Syphilis, hereditary or acquired, weakens the patient's resistance to tuberculosis.

"The susceptibility of the syphilitic to tuberculosis is directly proportionate to the carelessness of his treatment.

"To attack syphilis is, in some measure, to attack tuberculosis.

"The tuberculous syphilitic, if he survives the initial shock of the combined malady, tends to fibrous tuberculosis; his chance of recovery depends upon immediate, regular, and prolonged 'specific' treatment.

"Specific treatment, if exclusively mercurial and carefully conducted, instead of aggravating the tuberculosis, as has been falsely alleged, exercises a favorable influence upon it and promotes its cure."

The statement in this last paragraph, though running counter to text-book theory, certainly concords with clinical experience. If in the text the author appears to insist too strongly upon syphilis as a cause of tuberculosis, the excess is surely a pardonable one.

Atlas der Aetiologischen und Experimentellen Syphilisforschung. Edited by Erich Hoffmann. Berlin, Verlag von Julius Springer, 1908. New York Agent, G. E. Stechert and Co.

This timely publication is intended as a literary monument to the memory of Fritz Schaudinn, the discoverer of the spirochæte pallida, who died in June, 1906. To those who witnessed the demonstrations by Hoffmann at the occasion of the recent International Dermatological Congress in New York it will be an instructive souvenir.

The Atlas is bound in full cloth, contains as frontispiece an excellent photograph of Schaudinn, a short preface, an introduction and fifty-three pages of explanatory text to accompany the thirty-four plates, which latter, in their beautiful clearness and perfection, form the main contents of the Atlas.

The first seven colored plates illustrate monkeys in various stages of inoculation syphilis. Then follow twenty-three more colored and finally four photographic plates, showing in large variety the chief results of the microscopic investigations of the spirochæte pallida and other forms of spirochætes. These include many pictures by workers other than the original discoverers.

It is impossible to mention in detail all the interesting and instructive material collected in the Atlas, which will prove a welcome record of modern syphilidologic research to all engaged in this department of medicine.

J. Z.

RESOLUTIONS OF RESPECT TO THE MEMORY OF ROBERT W. TAYLOR.

Born, August 11, 1842. *Died, January* 5, 1908.

Dr. Taylor was one of the founders of the New York Dermatological Society, the oldest dermatological association in existence. Since its organization in 1869, to the meeting held shortly before his death, and at which he was present, he had always been one of its most zealous members.

An indefatigable student, an earnest and convincing teacher, and a brilliant and prolific writer, his death will not only be keenly felt by those who had the opportunity of working with him and profiting by the example of his energy and enthusiasm, but will be regarded as an irreparable loss to the medical profession. Among the eminent names which have been inscribed upon the muster-roll of our society, Dr. Taylor's name will ever rank high. No member has been more faithful in the discharge of its duties, and no one by his professional achievements has shed greater lustre upon its membership.

In our grief at the thought that he will meet with us no more, we feel that we have lost not only a very distinguished colleague, but a most estimable friend.

George Henry Fox,
Hermann Klotz,
Edward B. Bronson,
Committee.

THE DEATH OF DR. ROBERT W. TAYLOR.

At a stated meeting of the Medical Association of the Greater City of New York, held February 17, 1908, the following report was presented and adopted. P. Brynberg Porter, Recording Secretary.

Mr. President:

At your direction we call the attention of the Association to the recent death of our late lamented colleague, Dr. Robert William Taylor.

It is wholly fitting that a halt should be called in our proceedings to do honor to him, one of the most distinguished of our members. To us was rendered what was probably his last public service in that domain of medicine in which his life-work was mainly engaged. Even then, hampered as he doubtless was, and with something of his old-time vigor impaired, through the encroachments of the fatal malady to which he shortly after so suddenly succumbed, there was still in evidence that sincerity of purpose, zeal, and earnestness which had always characterized the spirit of his work.

Though chiefly preëminent in the field of that most intricate and absorbing of all enigmas of medical research, syphilis, Taylor's name was also famous for signal services looking to the relief of those other ills of erring flesh, the hideous progeny of lust and folly. Through the welter of these afflictions of humanity, involving as they do the innocent as well as the erring, he waged a life-long combat; seeking the roots and remedies of evil and bearing aloft the torch of hope.

Nor did these Augean labors limit the range of his activities. Beginning his professional career at a time when, more than now, were associated in a common specialty both venereal diseases and the general affections of the skin, his interest in and contributions to dermatology were most valuable and occupied him to the end.

The list of his published works in these fields of research is an extensive one. They have had great influence in the medical world, and a considerable number of them were translated and published in foreign tongues. One of the earlier of his better known contributions thus honored was a paper entitled, "On Dactylitis Syphilitica, with Observations on Syphilitic Lesions of the Joints," published in 1871. The subject matter here presented was a field comparatively unexplored,

and this paper attracted attention far and near. In 1879 Taylor's name became associated with that of Bumstead in joint authorship of the fourth edition of the "Pathology and Treatment of Venereal Diseases." Under the same title, in 1895, after Bumstead's death, Taylor rewrote the book, which was now published under his own name and independently. Subsequent editions (the third appearing in 1904) have the title, "A Practical Treatise on Genito-Urinary Diseases and Syphilis." This work took high rank as a text-book, and still remains a standard authority. In 1897 appeared his "Practical Treatise on Sexual Diseases of the Male and Female," of which a third edition was published in 1905. Another notable work by Taylor was his "Clinical Atlas of Venereal and Skin Diseases," and in addition to these books there was a long list of papers on many themes relating to those subjects with which he was specially concerned; many of them of great value and all elaborated with exemplary care.

Beside his literary labors should be placed his long service at Charity (now the City) Hospital, where he trod in the footsteps of those earlier masters, Van Buren and Bumstead; together with his public teachings as professor in the chairs either of venereal or skin diseases, first at the Woman's Medical College and later at the College of Physicians and Surgeons, as well as at the University of Vermont.

In all of these labors his work was indefatigable. With a catholic spirit he combined the temper of the conservative. Broad in regard to the views of others, the expression of his personal judgment was tempered with caution and reserve.

But, while acknowledging the worth of his intellectual achievements, let us not forget the amiable qualities of the man. By nature impetuous, while sometimes hasty of speech and on occasion resentful of real or fancied injuries, Taylor was a loyal friend and an agreeable man to meet. In his manner, with its air of cordiality, cheerfulness and bonhomie, there was a something that savored of a personal compliment. He liked to be liked, as, in his home life, he loved to be loved. The pity of it is that in his home, where all should have been happiness and content, one deep shadow of affliction succeeded another, till in his latter days lonely grief tinged his life with sombreness, and doubtless accelerated its end. So, in our acclaim over the triumphs of an accomplished career, a successful life, there intrudes the note of pathos, an undertone of sympathetic regret. Peace to his ashes! Lasting honor to his shade!

(Signed) E. B. Bronson, *Chairman.*
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